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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/541,016	06/28/2005	Peter Grahle	GRAHLE, P. ET AL 2 PCT	4037

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WILLIAM COLLARD
COLLARD & ROE, P.C.
1077 NORTHERN BOULEVARD
ROSLYN, NY 11576

EXAMINER	
DUFF, DOUGLAS J	

ART UNIT	PAPER NUMBER
3748	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/541,016	GRAHLE ET AL.	
	Examiner	Art Unit	
	Douglas J. Duff	3748	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-14* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-14* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *6/28/05*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 1-7 and 12-14 are rejected under 35 U.S.C. 103(a) as being obvious in view of Hertell (DE 4020082A1). Regarding claim 1, Hertell discloses a sintered metal rotor of a rotary piston pump, in particular a rotary piston pump for generating a vacuum of a vacuum brake booster of a motor vehicle, where the brake booster can be connected to a vacuum pump intake connection, with a pot-shaped base body (11, 12) and a bearing journal element (Fig. 6) which protrudes centrally from the bottom of this base body from a cylindrical foot area (2.1 and 2.2) coming directly out of the bottom and a connecting claw section (17) to be connected to it for a coupling element (6) to be attached, comprising the features the connecting claw section is designed in the form of two protruding individual webs (16), the individual webs are diametrically opposed in the outside circumferential area of the cylindrical base section (Fig. 4) in an area limited to max. 100° at the circumference and radially to max. 25% of the diameter (13) of the cylindrical base section (11, 12), the two connecting claw individual webs are press-sintered by sintering compression rams that are designed based on the cross-sectional area and are separately operable by the other sintering compression rams that are necessary to create the rotor (Fig. 6).

3. Since a single figure appears to show the necessary relative dimensions of the webs (16) having an area limited to 100 degrees at the circumference and radially to 25% of the diameter, it is deemed inherent, absent evidence to the contrary, that the webs are within 100 degrees of the circumference and radially to 25% of the diameter. See MPEP 2112, V.

4. Regarding claims 2-7 and 12-14, Hertell discloses the rotor according to Claim 1, wherein the two individual webs (16) have the same size and shape (Fig. 7), the circumferential area assumed by an individual web (16) is limited to max. 90° (Fig. 4), the area assumed radially by the individual webs (16) is limited to max. 20% of the cylindrical base section (11, 12), the individual webs (16) of the connecting claw section are case-hardened in edge profiles, the case-hardening in edge profiles is inductively generated, the edge-hardened area is shock cooled, wherein separate rams assigned to the individual webs (16) according to cross section are provided with a separate pressure acting on them in a sintering compression mold for producing the sintered rotor and copper in infiltrated form at least in the individual webs penetrates out of a superficially copper layer applied at least to the individual webs and into the sintered structure during the sintering heat treatment.

5. Since a single figure appears to show the necessary relative dimensions of the webs (16) having an area limited to 90 degrees at the circumference and radially to 20% of the diameter, it is deemed inherent, absent evidence to the contrary, that the webs are within 90 degrees of the circumference and radially to 20% of the diameter. See MPEP 2112, V.

6. Hertell teaches that the rotor and coupling are comprised of a sintered metal material, but is silent as to the method of making. The claimed phrases "the two connecting claw individual webs are press-sintered by sintering compression rams that are designed based on the cross-sectional area and are separately operable by the other sintering compression rams that are necessary to create the rotor ", "case-hardened in edge profiles", "the case-hardening in edge profiles is inductively generated", "the edge-hardened area is shock cooled", "copper that has been infiltrated subsequently into the pressed sintered structure", "wherein separate rams assigned to the individual webs according to cross section are provided with a separate pressure acting on them in a sintering compression mold for producing the sintered rotor" and "infiltrated form at least in the individual webs penetrates out of a superficially copper layer applied at least to the individual webs and into the sintered structure during the sintering heat treatment" are being treated as a product by process limitation; that is, that the rotor is made by the sintering method above. As set forth in MPEP 2113, product by process claims are NOT limited to the manipulations of the recited steps, only to the structure implied by the steps. Once a product appearing to be substantially the same or similar is found, a 35 U.S.C. 102/103 rejection may be made and the burden is shifted to applicant to show an unobvious difference. See MPEP 2113.

7. Thus, even though Hertell is silent as to the process used to make the sintered rotor, it appears that the product in Hertell would be the same or similar as that claimed; especially since both applicant's product and the prior art product is made of a sintered rotor and coupling (see Hertell abstract).

8. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hertell in view of Straus (DE 19703499 A1). Hertell discloses the rotor of claim 1, but fails to disclose the webs, including at least one transitional area directly adjacent in the direction of the rotor base body, containing copper.

9. Strauss teaches a rotor made of sintered metal where the individual webs, including at least one transitional area directly adjacent in the direction of the rotor base body, containing copper (col. 1, line 31). It would have been obvious for a person having ordinary skill in the art at the time the invention was made to utilize copper in the webs in order to have a metal of low-melting point penetrate the porous zone of the sintered piece (Abstract).

10. Claims 9-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hertell in view of Straus as applied to claim 8 above, and further in view of Yoshida (JP 401142287A). The modified Hertell device discloses the invention as disclosed in claim 8, but fails to disclose a specific gravity of at least 7.5 g/cm^3.

11. Yoshida teaches a rotor with web (8) having a specific gravity of at least 7.5 g/cm^3. It would have been obvious for a person having ordinary skill in the art at the time the invention was made to utilize a web with a specific gravity of at least 7.5 g/cm^3 (Abstract, line 3) in order to provide a rotary pump with excellent abrasion resistance and machinability (Abstract).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Douglas J. Duff whose telephone number is (571) 272-3459. The examiner can normally be reached on M-F 7 AM - 5 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas Denion can be reached on (571) 272-4859. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Douglas J. Duff

8/14/07

Thomas Denion

THOMAS DENION
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3700